FIG.1

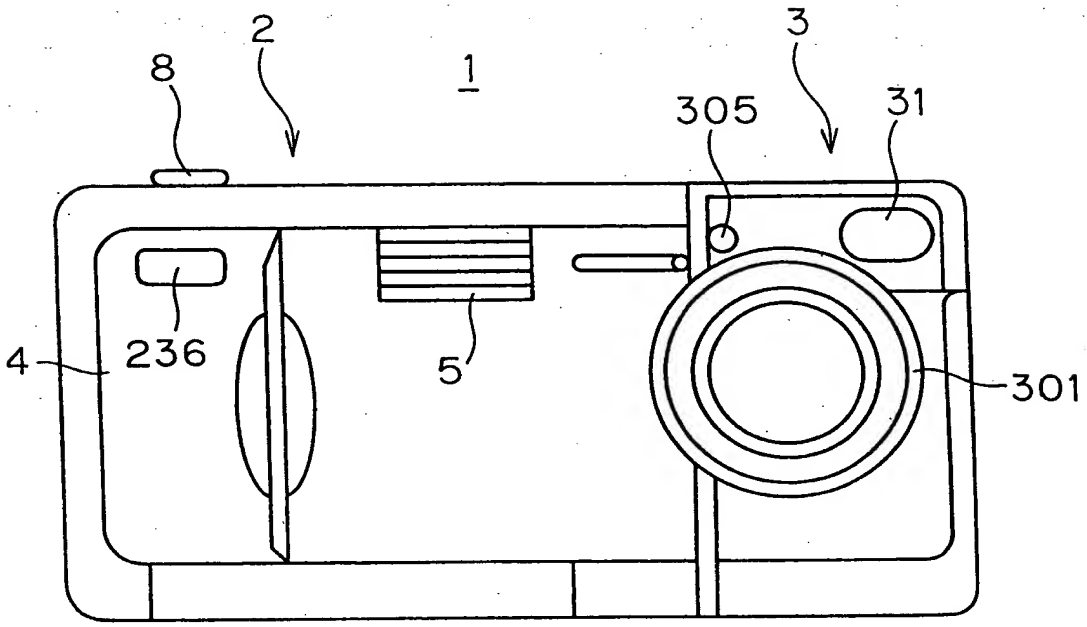

8
2
1
3
305
31
4
236
5
301

FIG.2

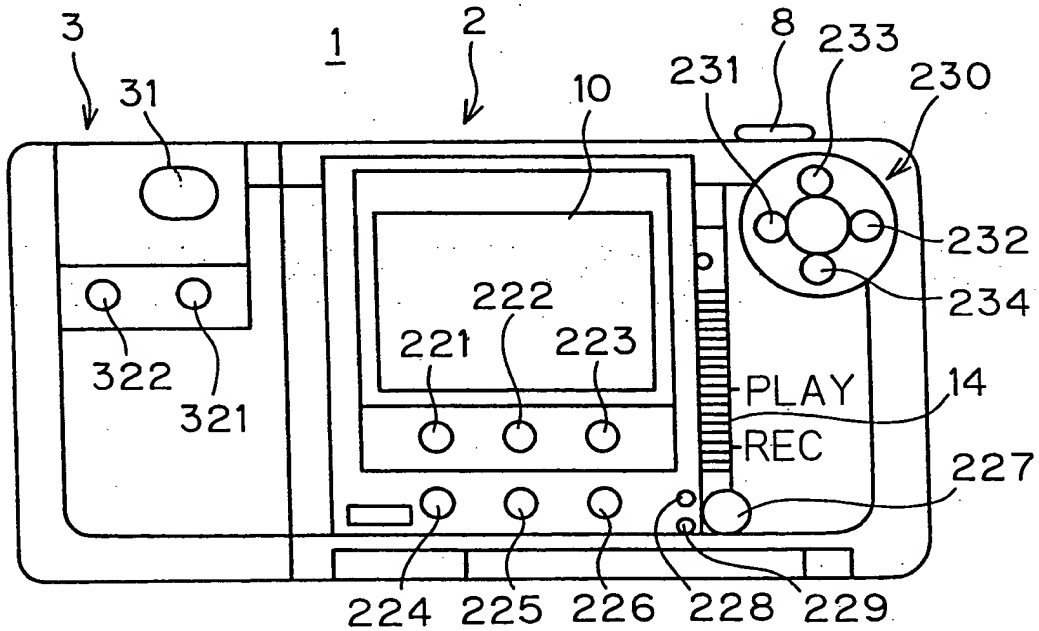

3
31
1
2
10
231
8
233
230
232
234
222
221
223
322
321
PLAY
14
REC
227
224
225
226
228
229

FIG.3

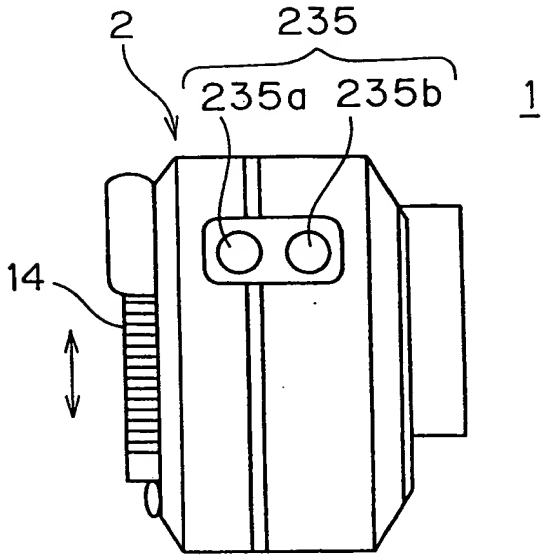



FIG.4

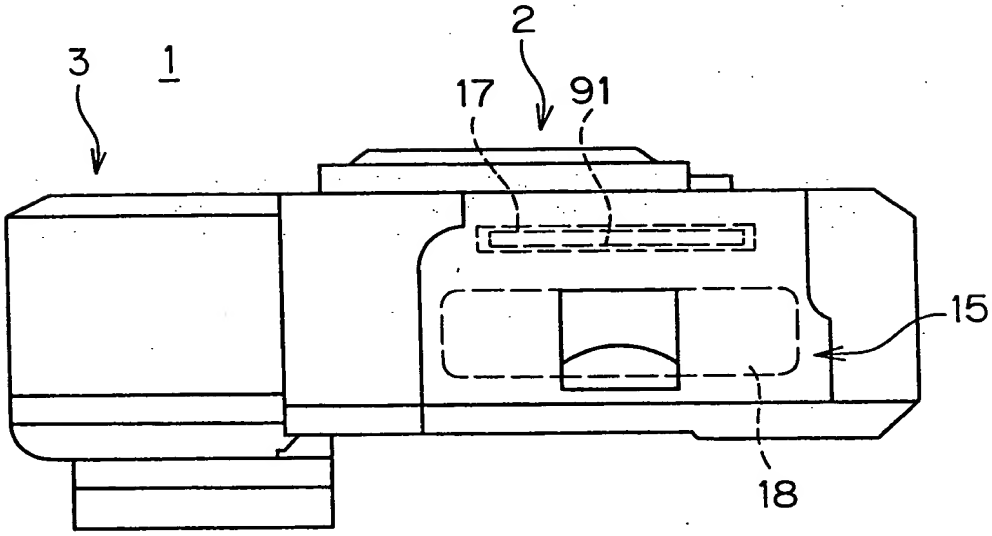


FIG.5

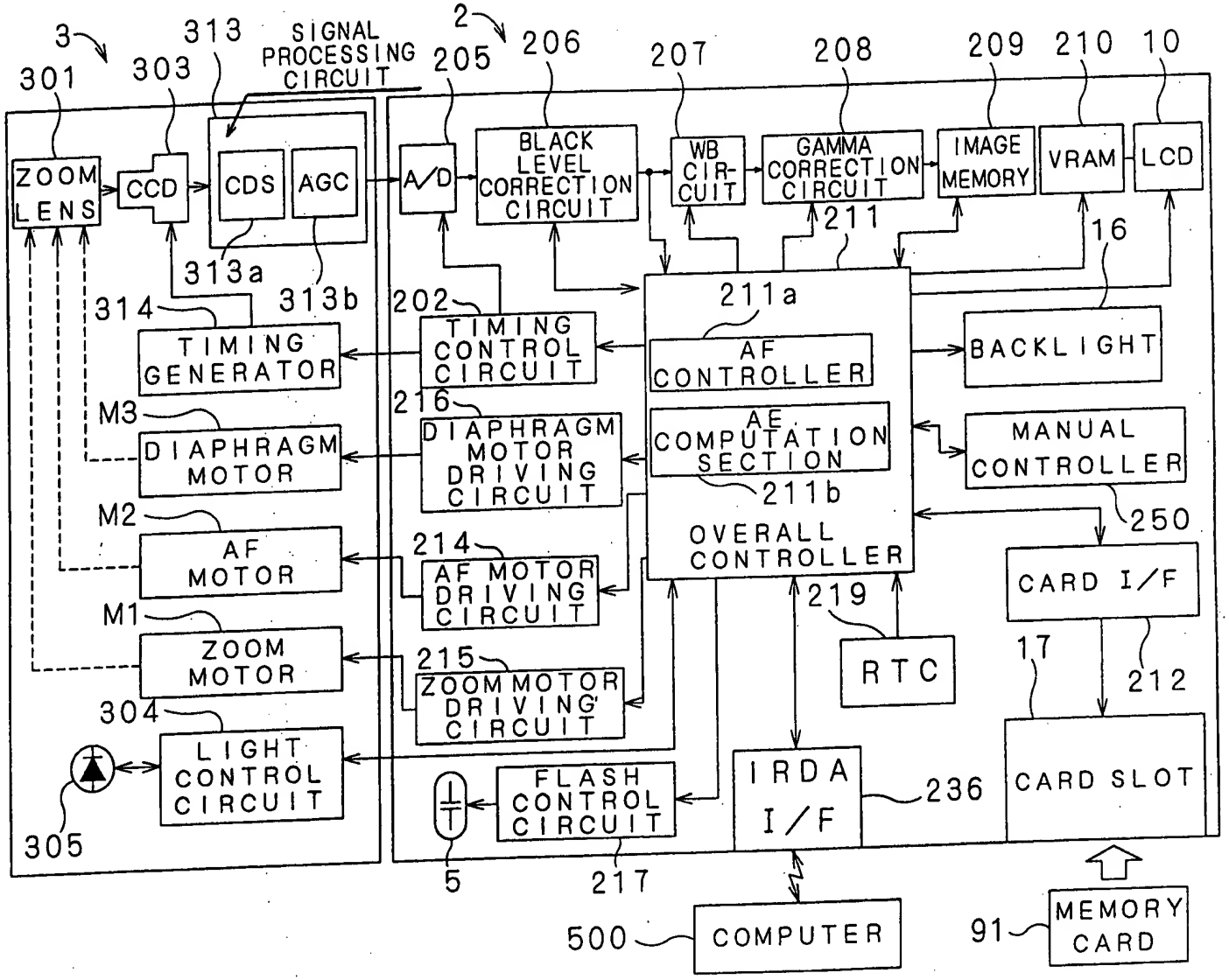

3
301
303
313
SIGNAL PROCESSING CIRCUIT
2
205
206
207
208
209
210
10
ZOOM LENS
CCD
CDS
AGC
A/D
BLACK LEVEL CORRECTION CIRCUIT
WB CIR-CUIT
GAMMA CORRECTION CIRCUIT
IMAGE MEMORY
VRAM
LCD
313a
313b
211
16
314
202
211a
TIMING GENERATOR
TIMING CONTROL CIRCUIT
AF CONTROLLER
BACKLIGHT
M3
216
DIAPHRAGM MOTOR
DIAPHRAGM MOTOR DRIVING CIRCUIT
AE COMPUTATION SECTION
MANUAL CONTROLLER
211b
M2
250
AF MOTOR
214
AF MOTOR DRIVING CIRCUIT
OVERALL CONTROLLER
CARD I/F
M1
219
17
ZOOM MOTOR
215
ZOOM MOTOR DRIVING CIRCUIT
RTC
212
304
LIGHT CONTROL CIRCUIT
FLASH CONTROL CIRCUIT
IRDA I/F
236
CARD SLOT
305
5
217
500
COMPUTER
91
MEMORY CARD

FIG.6

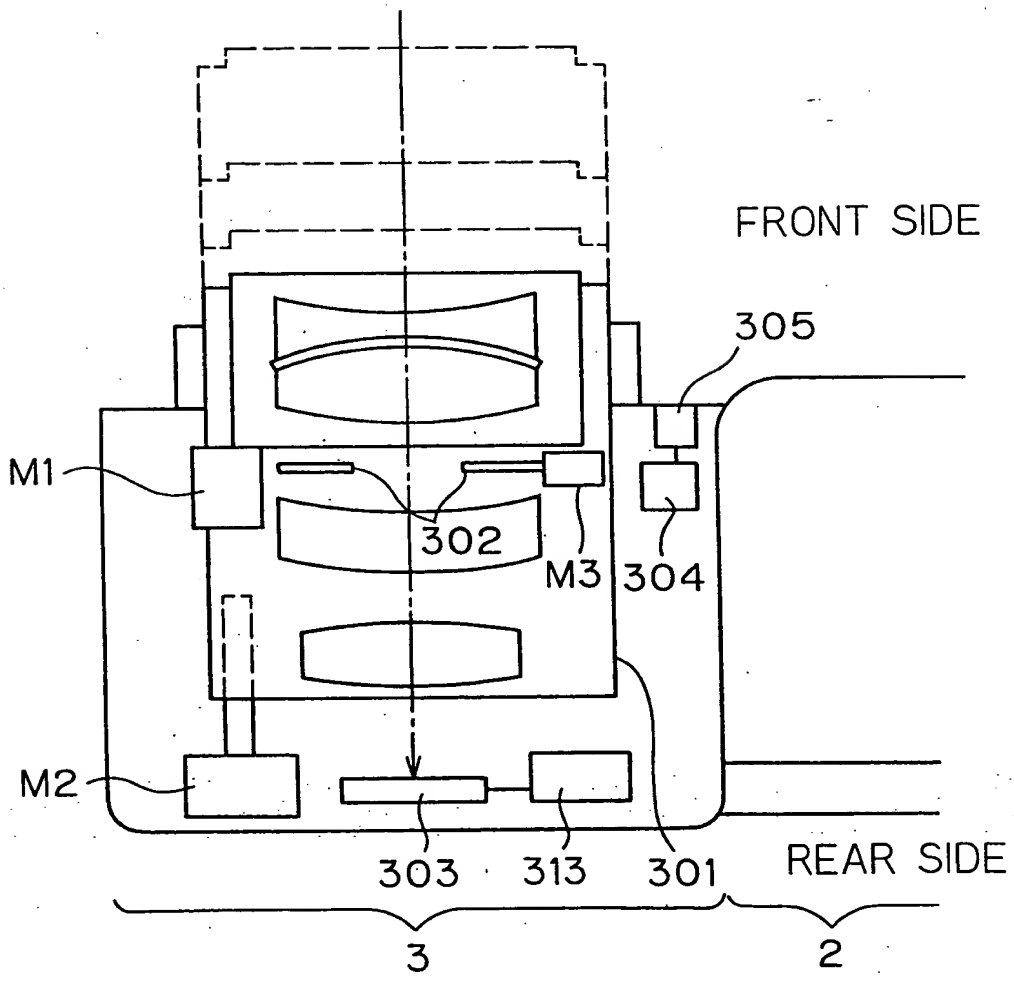


FIG.7

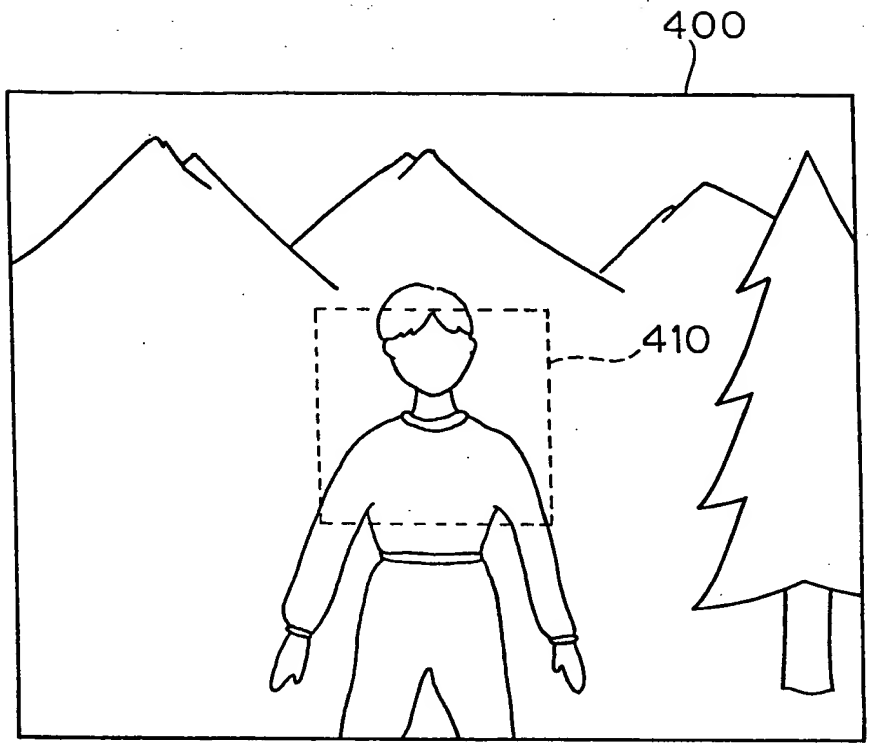



FIG.8

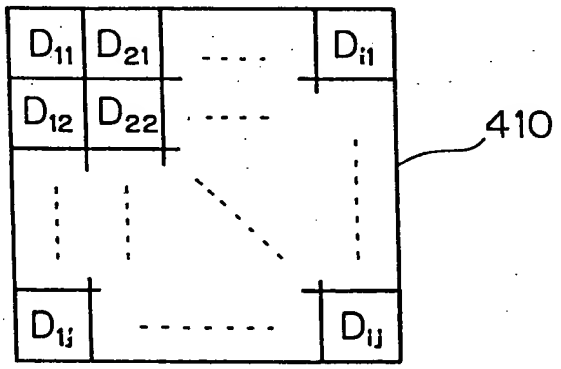


FIG.9

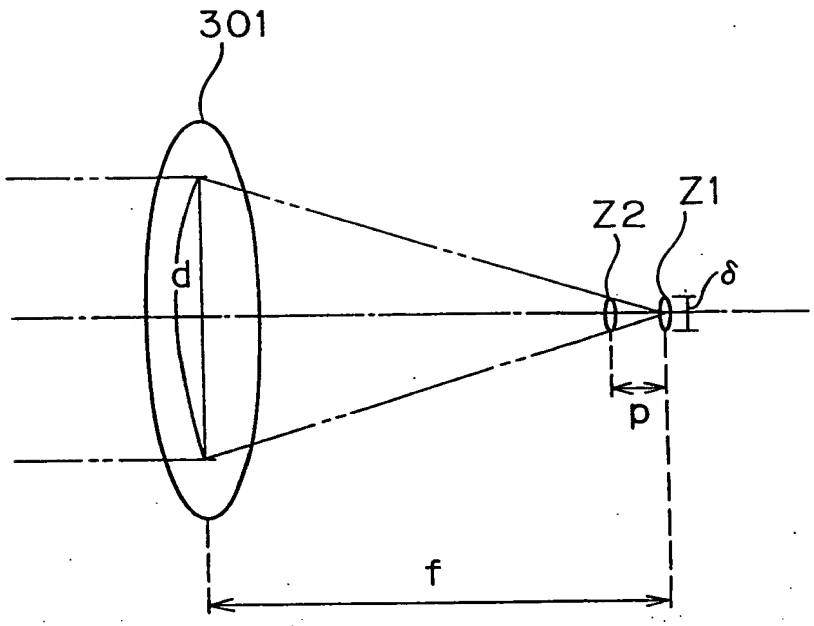


FIG. 10

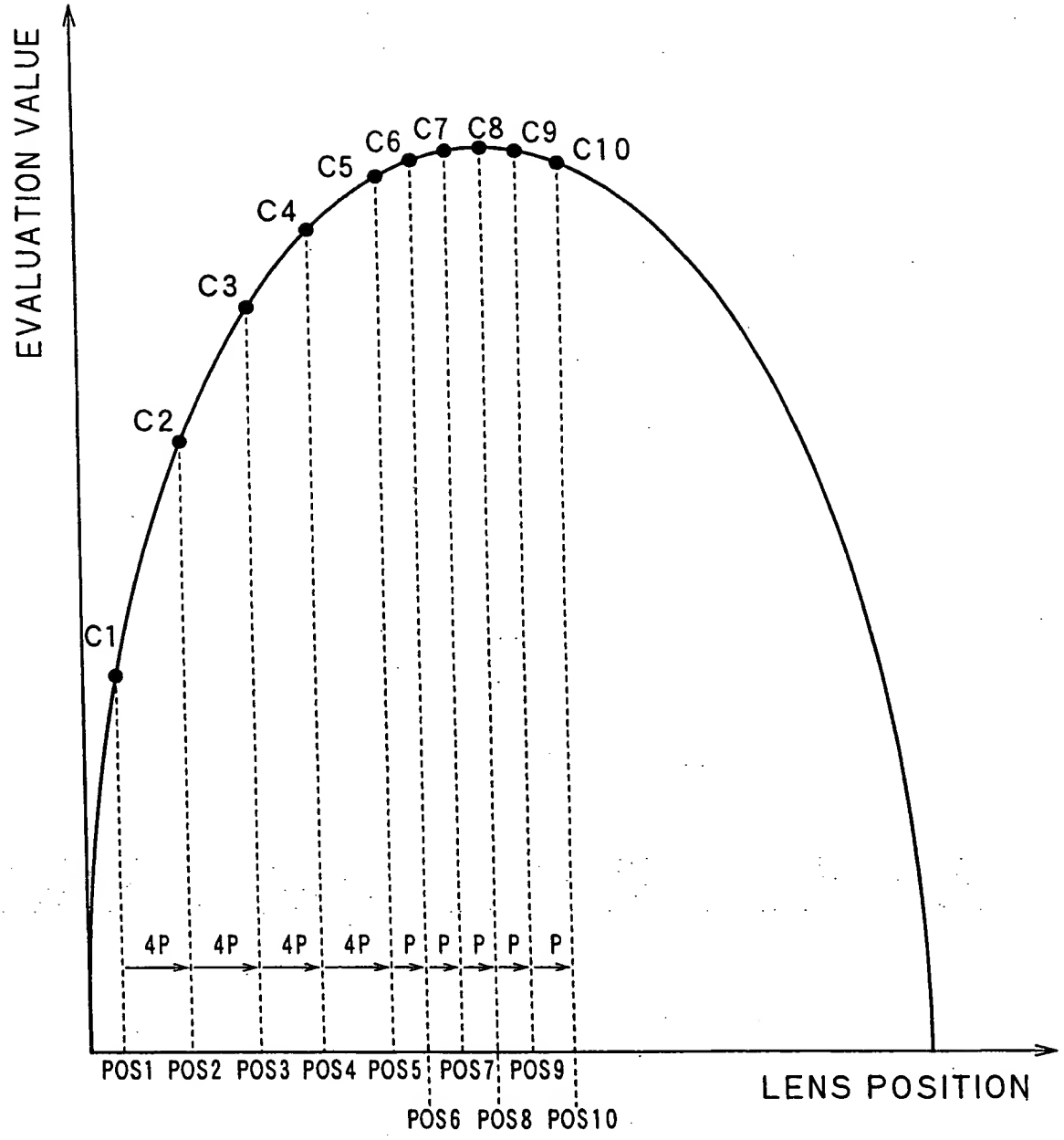

EVALUATION VALUE
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
4P
4P
4P
4P
P
P
P
P
P
POS1
POS2
POS3
POS4
POS5
POS6
POS7
POS8
POS9
POS10
LENS POSITION

FIG.11

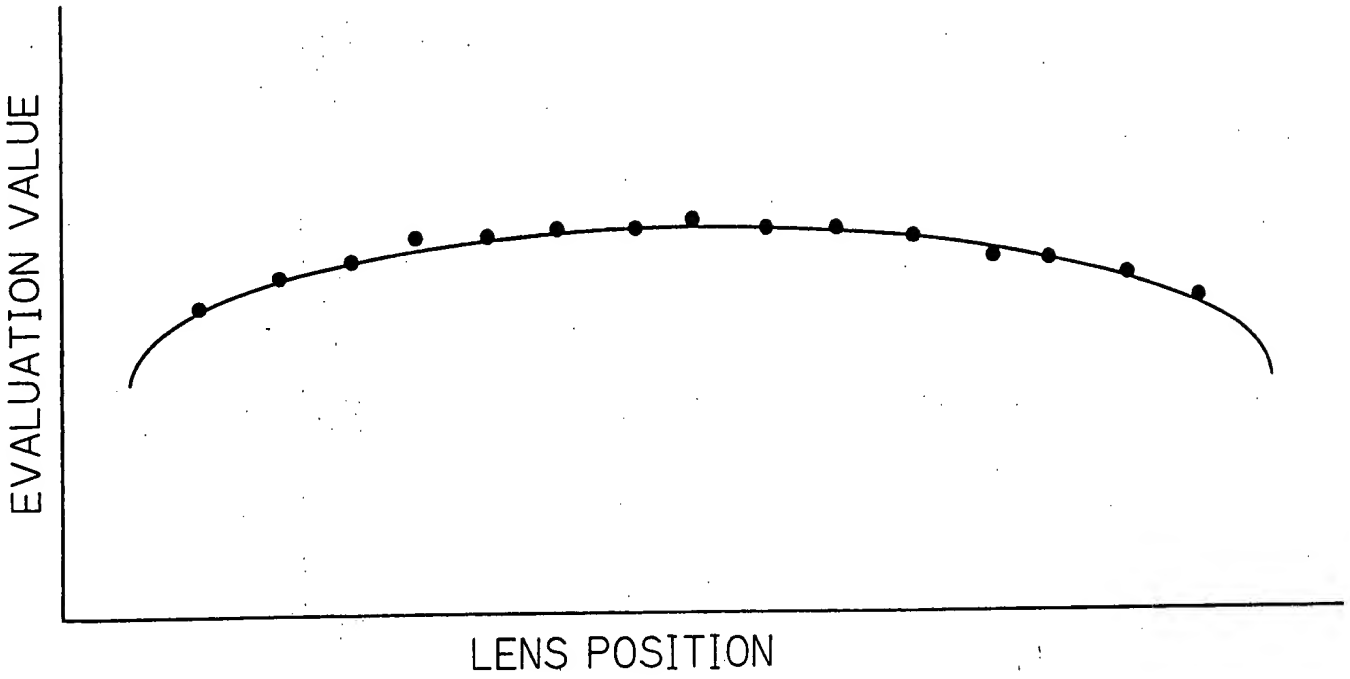


FIG. 12

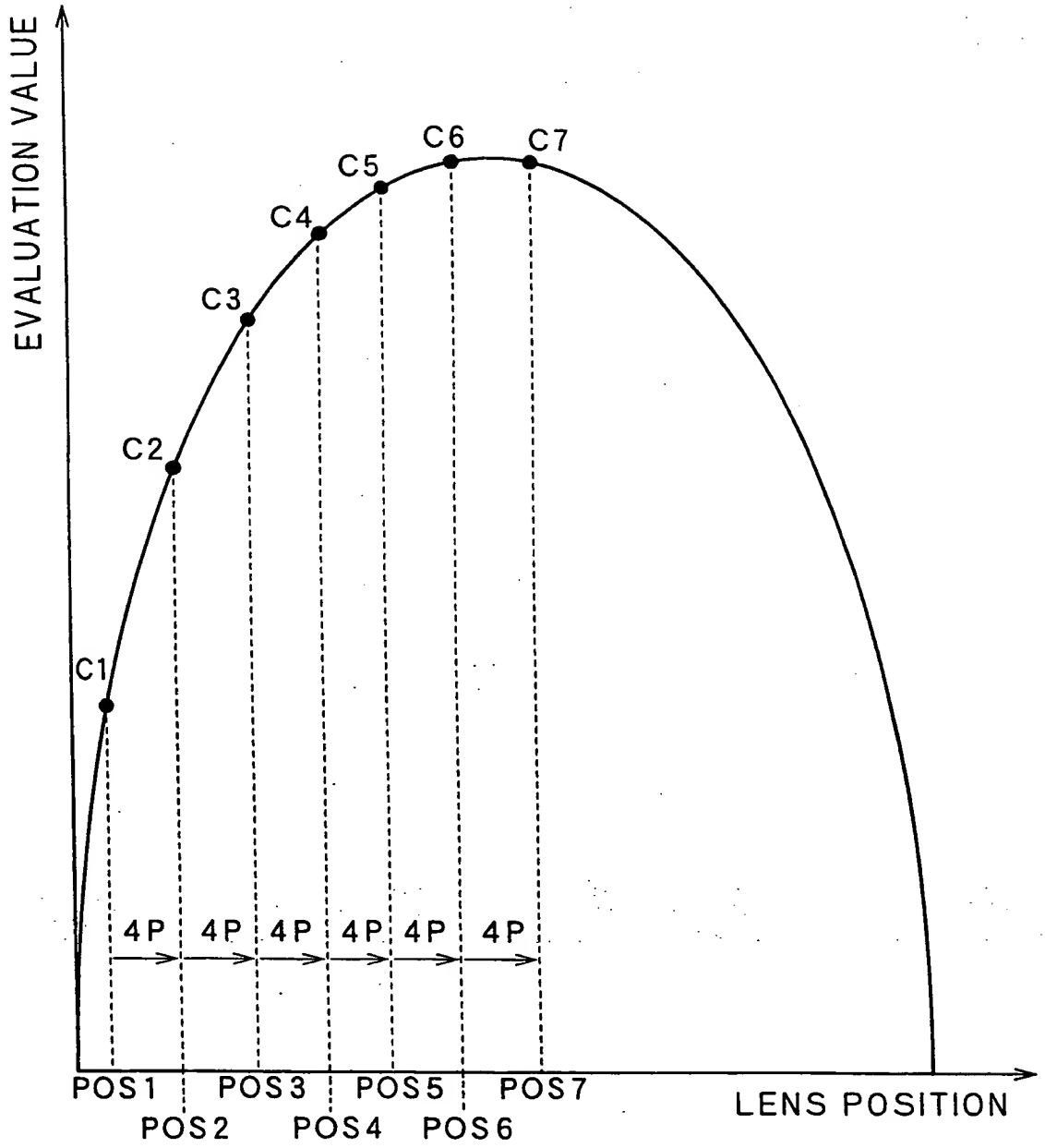

EVALUATION VALUE
C1
C2
C3
C4
C5
C6
C7
4P
4P
4P
4P
4P
4P
POS1
POS2
POS3
POS4
POS5
POS6
POS7
LENS POSITION

FIG. 13

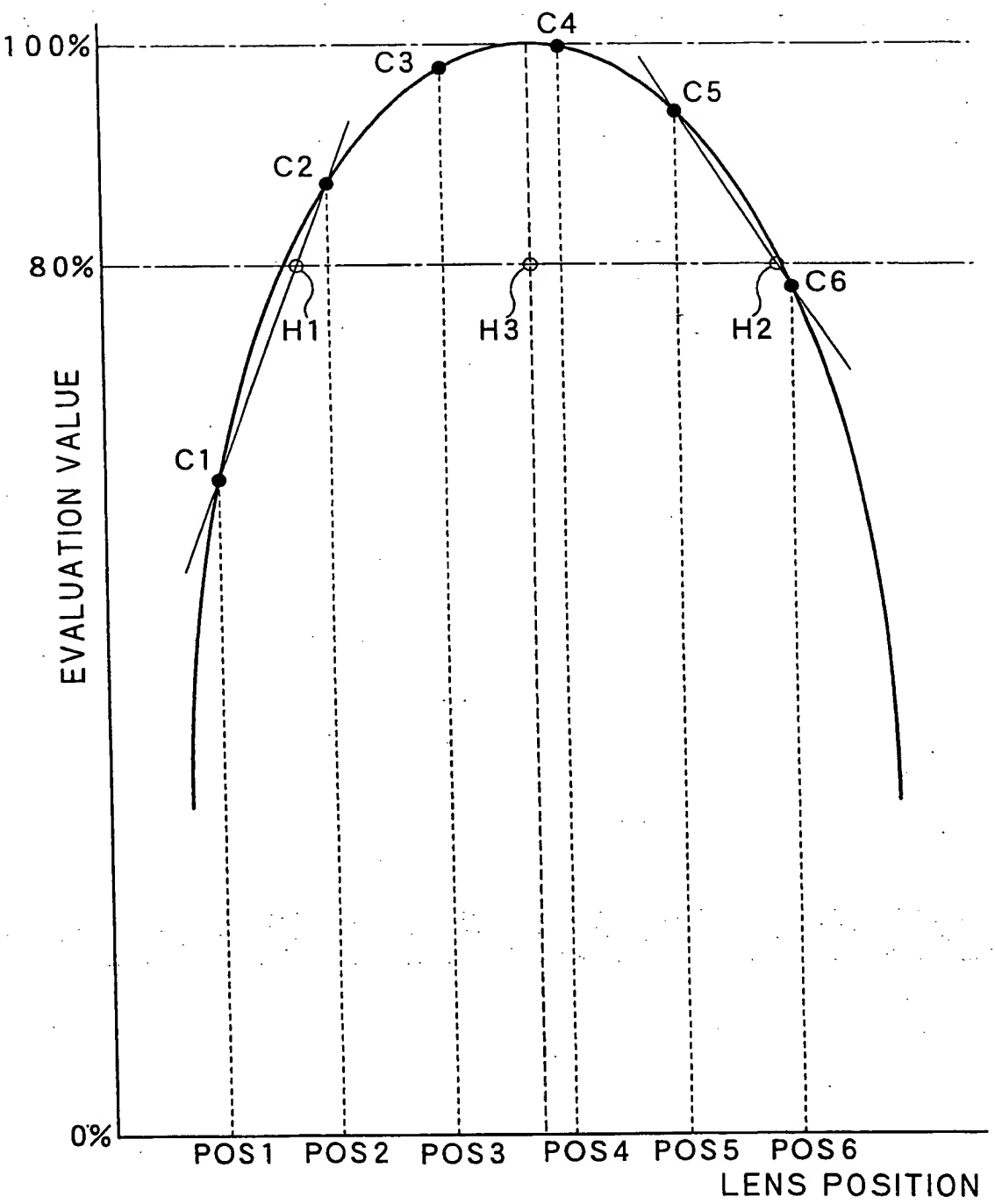

100%
80%
0%
EVALUATION VALUE
C1
C2
C3
C4
C5
C6
H1
H3
H2
POS1
POS2
POS3
POS4
POS5
POS6
LENS POSITION

FIG. 14

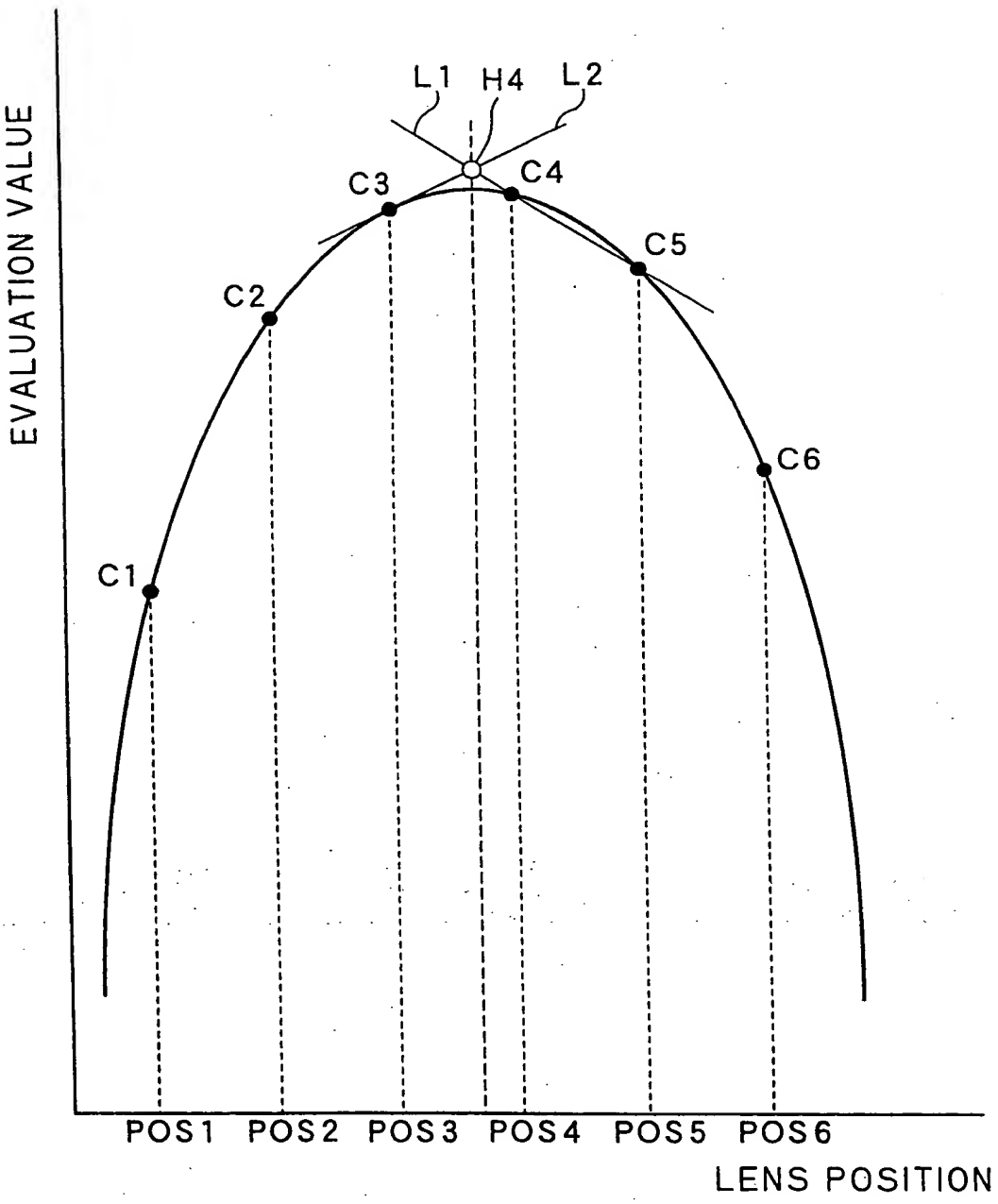

EVALUATION VALUE
L1
H4
L2
C1
C2
C3
C4
C5
C6
POS1
POS2
POS3
POS4
POS5
POS6
LENS POSITION

FIG. 15

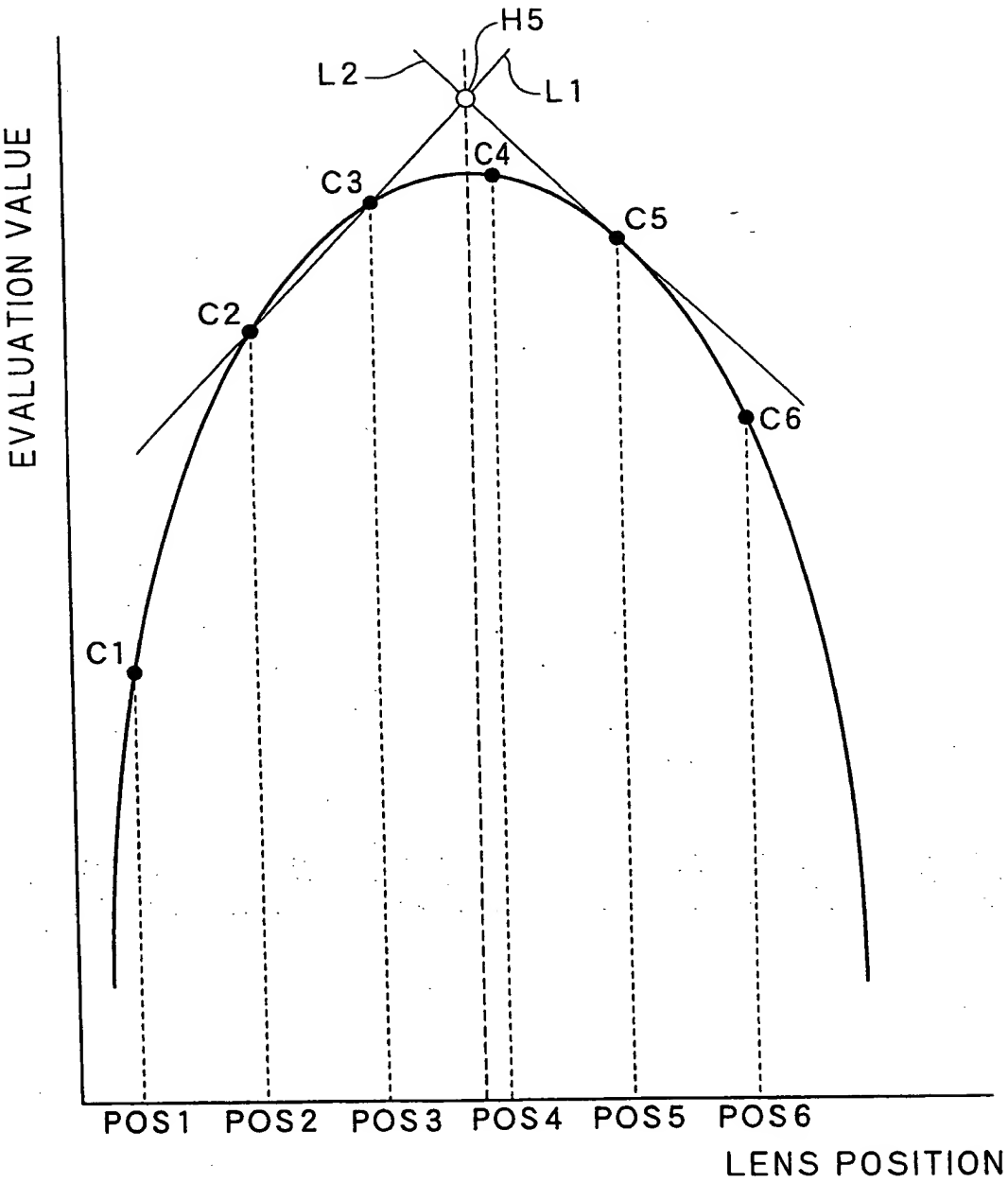

H5
L2
L1
C4
C3
C5
C2
C6
C1
EVALUATION VALUE
POS1
POS2
POS3
POS4
POS5
POS6
LENS POSITION

FIG.16

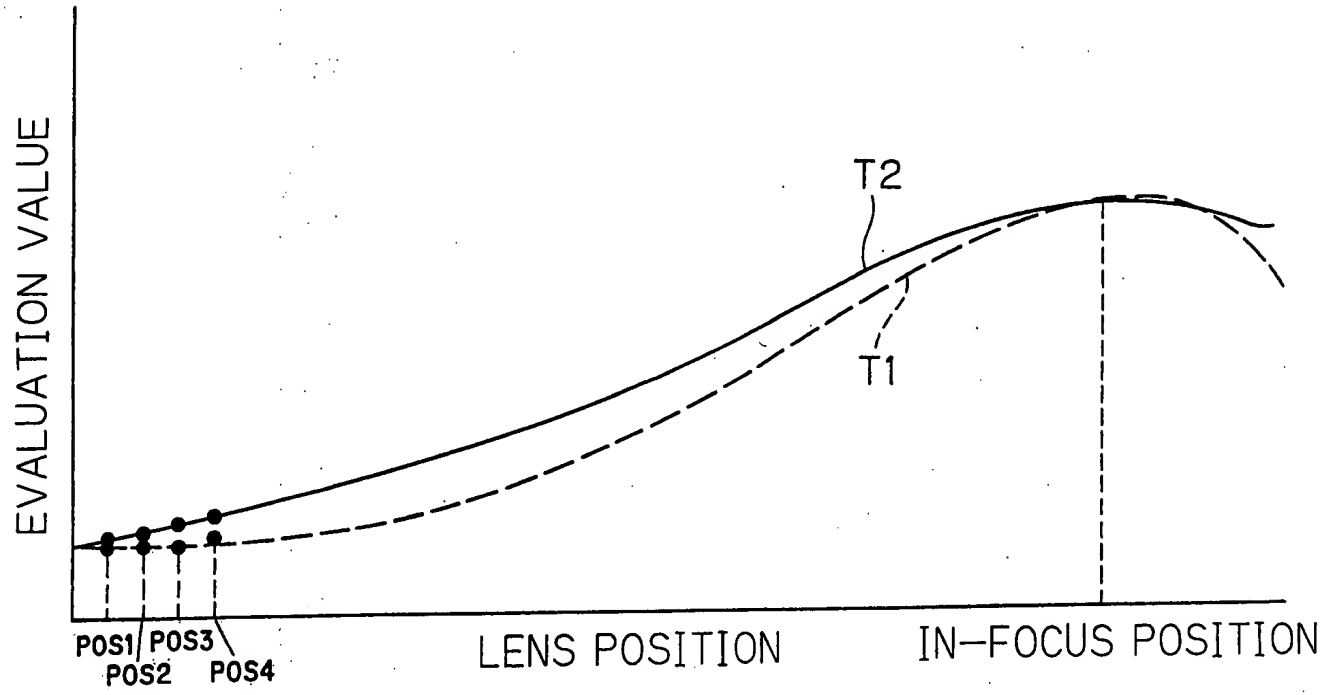

EVALUATION VALUE
T2
T1
POS1
POS2
POS3
POS4
LENS POSITION
IN-FOCUS POSITION

FIG. 17

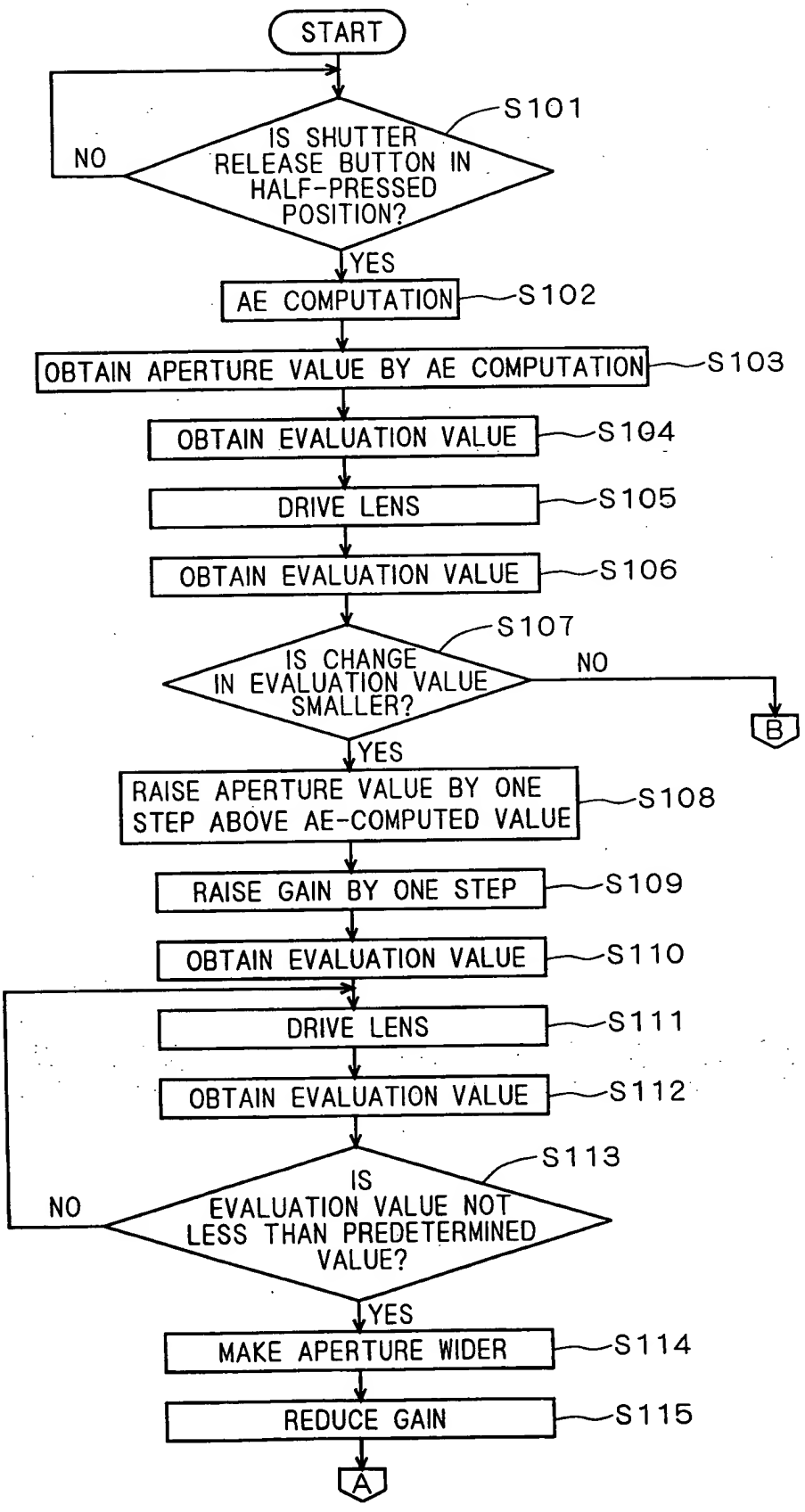

START
S101
IS SHUTTER RELEASE BUTTON IN HALF-PRESSED POSITION?
NO
YES
AE COMPUTATION
S102
OBTAIN APERTURE VALUE BY AE COMPUTATION
S103
OBTAIN EVALUATION VALUE
S104
DRIVE LENS
S105
OBTAIN EVALUATION VALUE
S106
S107
IS CHANGE IN EVALUATION VALUE SMALLER?
NO
B
YES
RAISE APERTURE VALUE BY ONE STEP ABOVE AE-COMPUTED VALUE
S108
RAISE GAIN BY ONE STEP
S109
OBTAIN EVALUATION VALUE
S110
DRIVE LENS
S111
OBTAIN EVALUATION VALUE
S112
S113
IS EVALUATION VALUE NOT LESS THAN PREDETERMINED VALUE?
NO
YES
MAKE APERTURE WIDER
S114
REDUCE GAIN
S115
A

FIG. 18

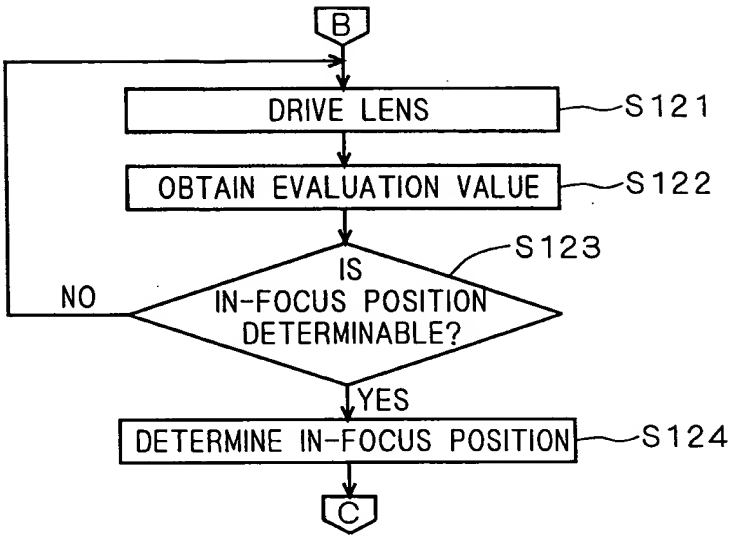

B
DRIVE LENS
S121
OBTAIN EVALUATION VALUE
S122
S123
IS
IN-FOCUS POSITION
DETERMINABLE?
NO
YES
DETERMINE IN-FOCUS POSITION
S124
C

FIG. 19

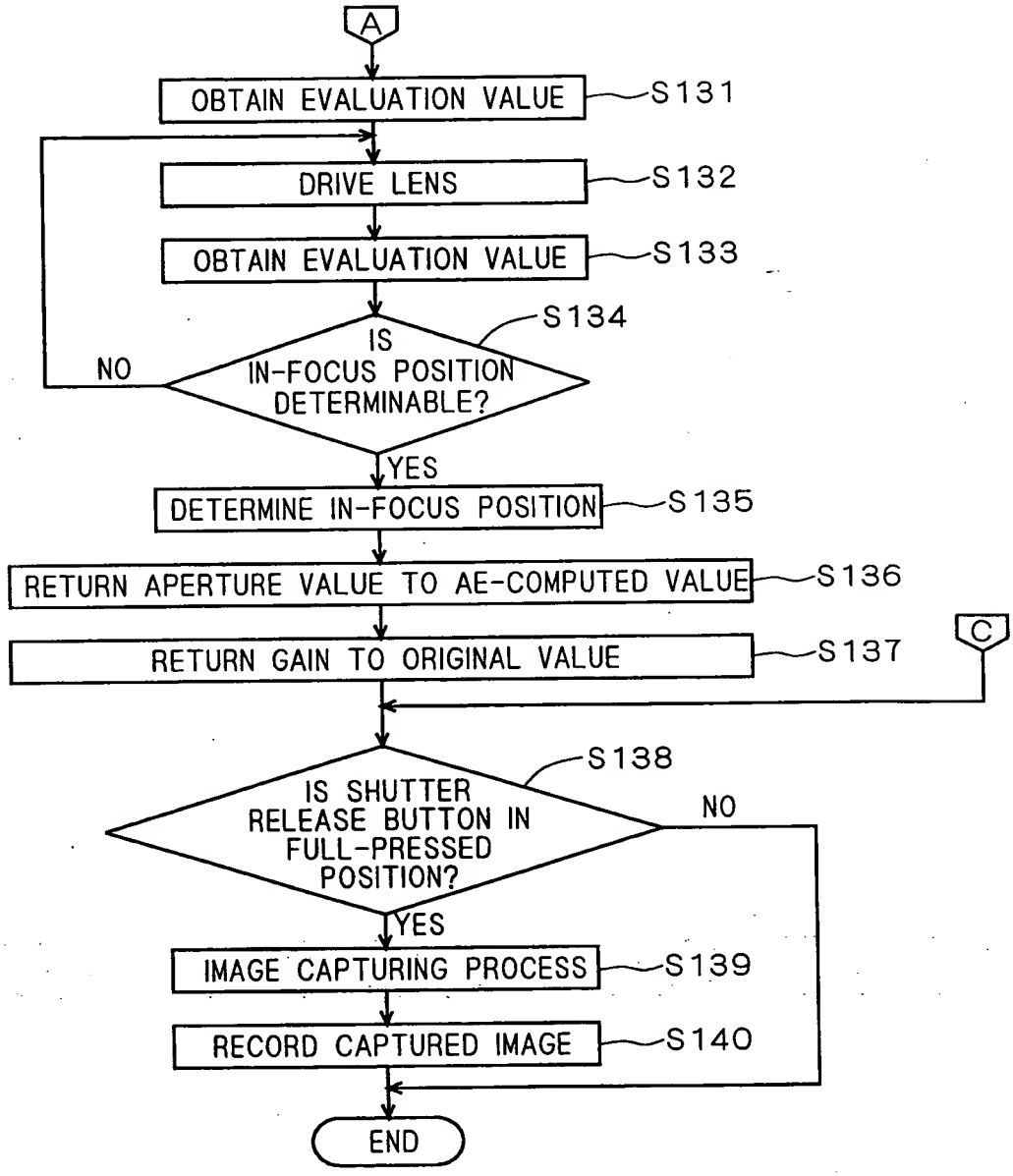

A
OBTAIN EVALUATION VALUE
S131
DRIVE LENS
S132
OBTAIN EVALUATION VALUE
S133
S134
IS IN-FOCUS POSITION DETERMINABLE?
NO
YES
DETERMINE IN-FOCUS POSITION
S135
RETURN APERTURE VALUE TO AE-COMPUTED VALUE
S136
RETURN GAIN TO ORIGINAL VALUE
S137
C
S138
IS SHUTTER RELEASE BUTTON IN FULL-PRESSED POSITION?
NO
YES
IMAGE CAPTURING PROCESS
S139
RECORD CAPTURED IMAGE
S140
END

FIG. 20

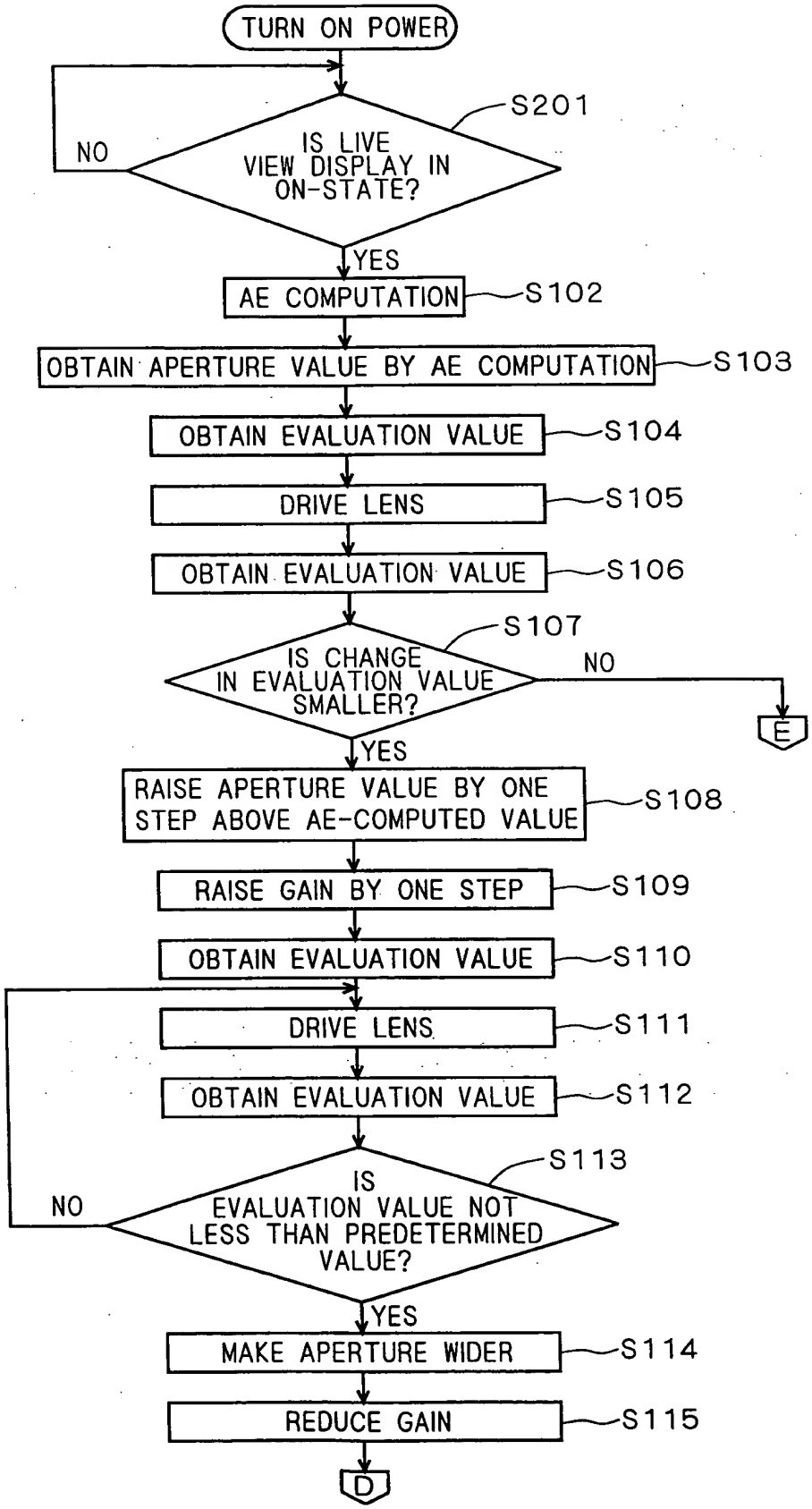

TURN ON POWER
S201
IS LIVE VIEW DISPLAY IN ON-STATE?
NO
YES
AE COMPUTATION
S102
OBTAIN APERTURE VALUE BY AE COMPUTATION
S103
OBTAIN EVALUATION VALUE
S104
DRIVE LENS
S105
OBTAIN EVALUATION VALUE
S106
S107
IS CHANGE IN EVALUATION VALUE SMALLER?
NO
E
YES
RAISE APERTURE VALUE BY ONE STEP ABOVE AE-COMPUTED VALUE
S108
RAISE GAIN BY ONE STEP
S109
OBTAIN EVALUATION VALUE
S110
DRIVE LENS
S111
OBTAIN EVALUATION VALUE
S112
S113
IS EVALUATION VALUE NOT LESS THAN PREDETERMINED VALUE?
NO
YES
MAKE APERTURE WIDER
S114
REDUCE GAIN
S115
D

FIG. 21

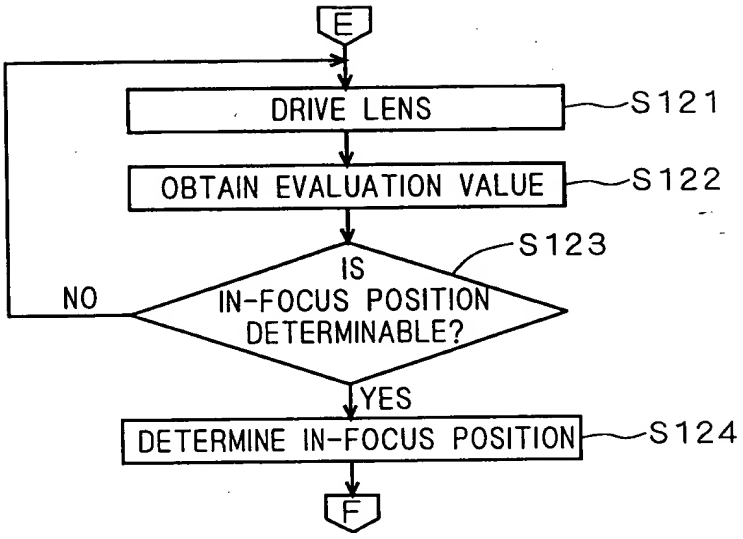

E
DRIVE LENS
S121
OBTAIN EVALUATION VALUE
S122
S123
IS
IN-FOCUS POSITION
DETERMINABLE?
NO
YES
DETERMINE IN-FOCUS POSITION
S124
F

FIG. 22

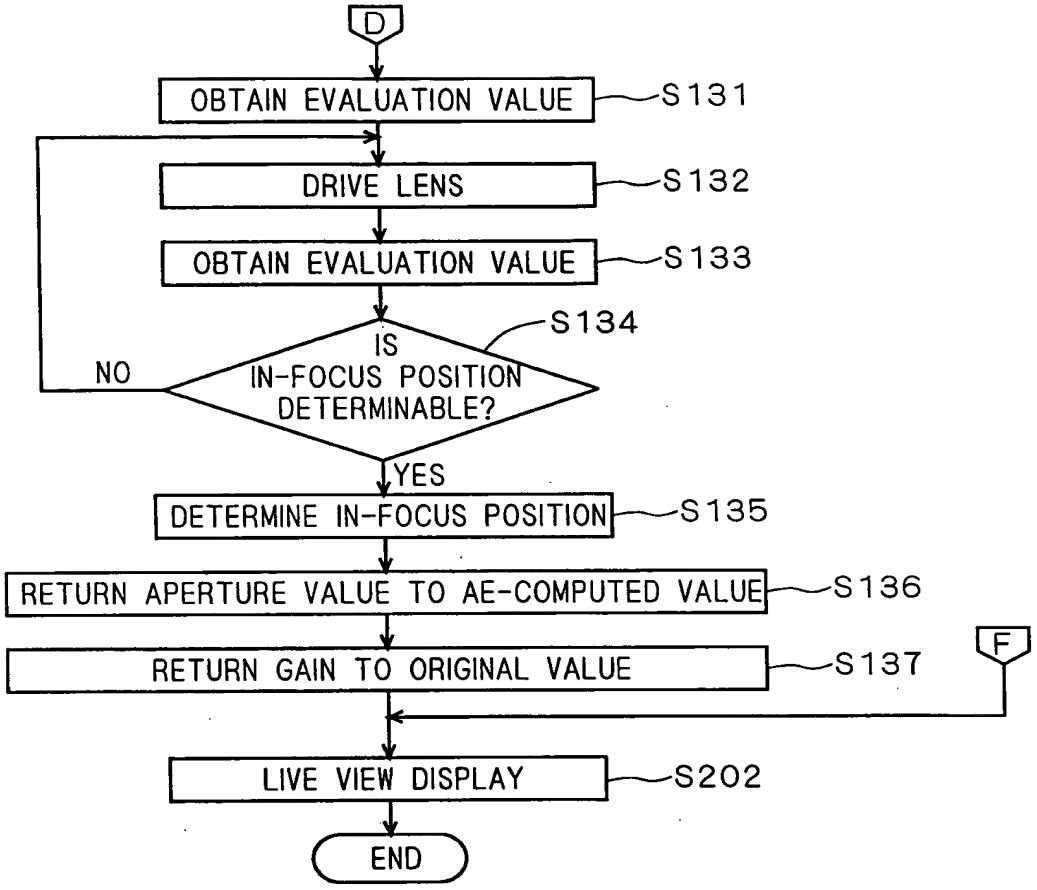

D
OBTAIN EVALUATION VALUE
S131
DRIVE LENS
S132
OBTAIN EVALUATION VALUE
S133
S134
IS
IN-FOCUS POSITION
DETERMINABLE?
NO
YES
DETERMINE IN-FOCUS POSITION
S135
RETURN APERTURE VALUE TO AE-COMPUTED VALUE
S136
RETURN GAIN TO ORIGINAL VALUE
S137
F
LIVE VIEW DISPLAY
S202
END

FIG. 23

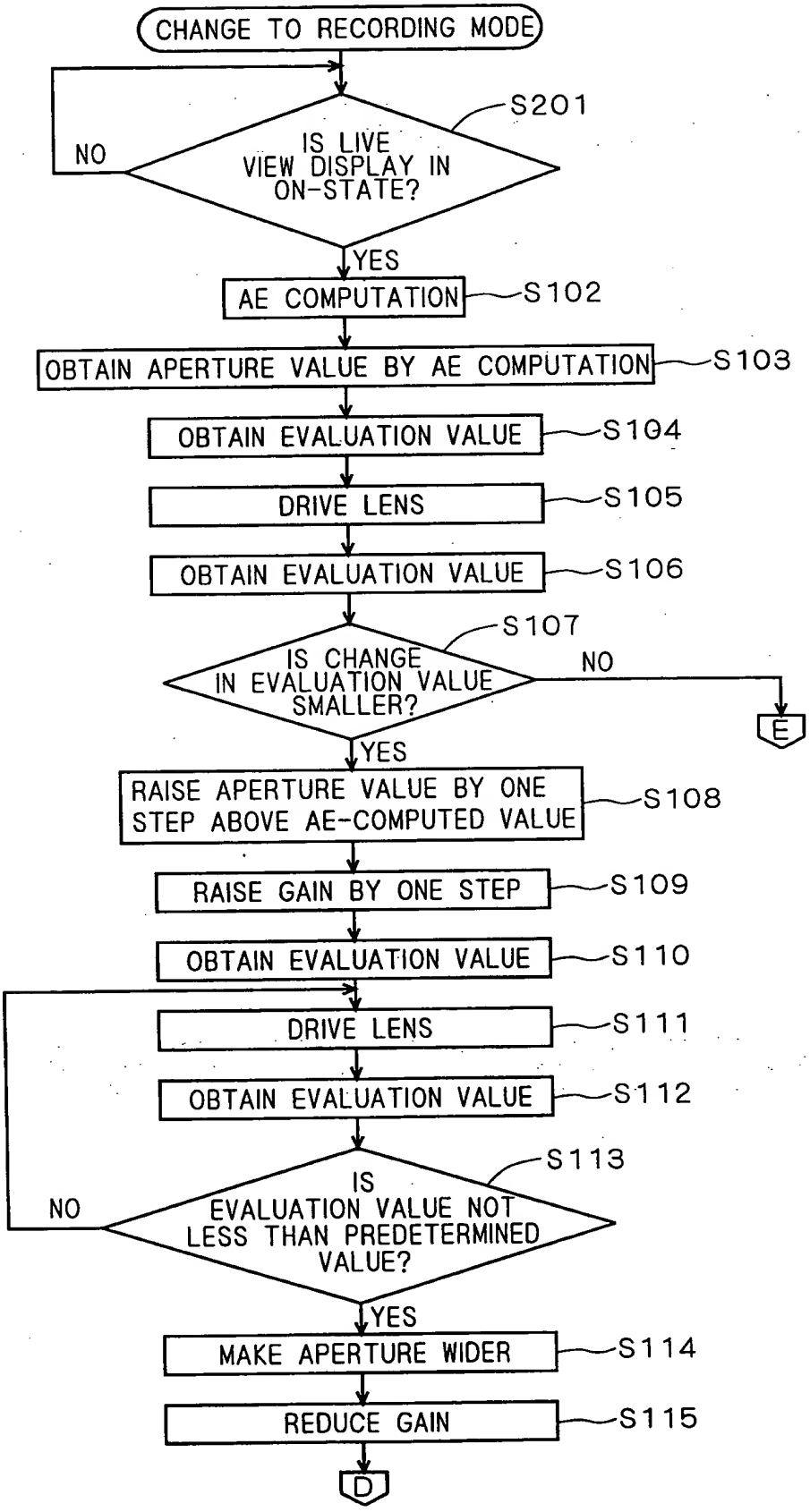
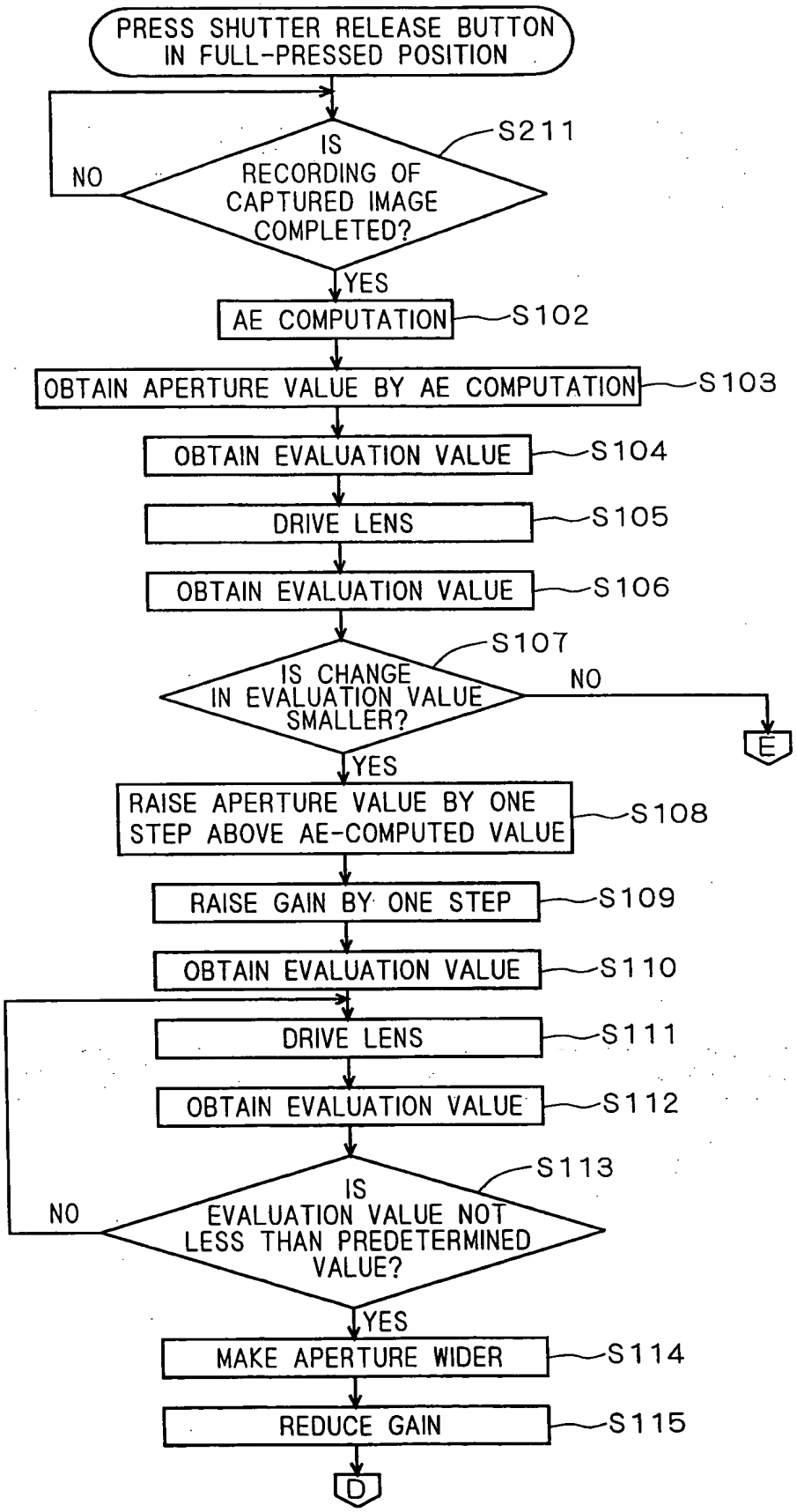

CHANGE TO RECORDING MODE
S201
IS LIVE VIEW DISPLAY IN ON-STATE?
NO
YES
AE COMPUTATION
S102
OBTAIN APERTURE VALUE BY AE COMPUTATION
S103
OBTAIN EVALUATION VALUE
S104
DRIVE LENS
S105
OBTAIN EVALUATION VALUE
S106
S107
IS CHANGE IN EVALUATION VALUE SMALLER?
NO
E
YES
RAISE APERTURE VALUE BY ONE STEP ABOVE AE-COMPUTED VALUE
S108
RAISE GAIN BY ONE STEP
S109
OBTAIN EVALUATION VALUE
S110
DRIVE LENS
S111
OBTAIN EVALUATION VALUE
S112
S113
IS EVALUATION VALUE NOT LESS THAN PREDETERMINED VALUE?
NO
YES
MAKE APERTURE WIDER
S114
REDUCE GAIN
S115
D

FIG. 24


PRESS SHUTTER RELEASE BUTTON IN FULL-PRESSED POSITION
S211
IS RECORDING OF CAPTURED IMAGE COMPLETED?
NO
YES
AE COMPUTATION
S102
OBTAIN APERTURE VALUE BY AE COMPUTATION
S103
OBTAIN EVALUATION VALUE
S104
DRIVE LENS
S105
OBTAIN EVALUATION VALUE
S106
S107
IS CHANGE IN EVALUATION VALUE SMALLER?
NO
E
YES
RAISE APERTURE VALUE BY ONE STEP ABOVE AE-COMPUTED VALUE
S108
RAISE GAIN BY ONE STEP
S109
OBTAIN EVALUATION VALUE
S110
DRIVE LENS
S111
OBTAIN EVALUATION VALUE
S112
S113
IS EVALUATION VALUE NOT LESS THAN PREDETERMINED VALUE?
NO
YES
MAKE APERTURE WIDER
S114
REDUCE GAIN
S115
D